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July 20, 2000
L-00-095

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

**Subject: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
Report of Facility Changes, Tests and Experiments**

In accordance with 10 CFR 50.59, the Report of Facility Changes, Tests, and Experiments for the Beaver Valley Power Station, Unit No. 1, is attached. This report provides a brief description of facility and procedure changes which required a 50.59 safety evaluation and a summary of the safety evaluations. The report covers the period of January 23, 1999, through January 22, 2000.

Each change was evaluated to determine (1) if the probability of occurrence or the consequences of an accident or the malfunction of equipment important to safety previously evaluated in the Updated Final Safety Analysis Report may be increased, or (2) if a possibility for an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report may be created, or (3) if the margin of safety as defined in the basis for any technical specification is reduced. In each case, it was determined that the change did not constitute an unreviewed safety question as defined in 10 CFR 50.59.

If you have any questions regarding this report, please contact Mr. Thomas S. Cosgrove, Manager, Licensing at 724-682-5203.

Sincerely,



Lew W. Myers

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CHANGE TITLE

1OM 11.4.E, Operating Procedure Change to Fill the Accumulators with Thermal Relief Valve RV-SI-894 Gagged

CHANGE

Relief Valve RV-SI-894 is a thermal relief valve that was installed under design change DCP-2204 and is currently leaking by at a pressure lower than its design relief setting, during the accumulator fill process. The valve is temporarily gagged to facilitate the accumulator fill process. A gag plug is installed in the top of the relief valve as part of a revision to operating procedure 1OM11.4E to prevent leakage during the fill process.

There is no Unreviewed Safety Question as a result of the installation of the gag screw in RV-SI-894. During the fill process, additional pressure protection for the SI accumulator fill lines is accomplished through the accumulator tank relief valves. Once the fill is completed, the system is returned to its original configuration. There are no design basis accidents described in the UFSAR that are affected by this change, nor will any new accident scenarios be created. Therefore, this change does not represent an Unreviewed Safety Question.

CHANGE TITLE

1OM 56.C.4.F-12, Establishing Temporary Ventilation

CHANGE

This revision provided specific steps to use a portable electric motor driven fan, energized by a gasoline driven portable electric generator, and provided temporary charging pump ventilation with discharge to the atmosphere during a fire induced safe shutdown event. This change was made to the station safe shutdown procedures, in accordance with the requirement of the BVPS-1 Updated Fire Protection Appendix R Review to provide temporary charging pump ventilation for various fire areas.

These actions are provided to mitigate the consequences of specifically identified fire events and as such are not performed under any other circumstances. In accordance with the Appendix R assumptions and analysis, this change will not result in an unanalyzed loss of the only operating charging pump. Health Physics notification and sampling requirements when this discharge path is placed in service will ensure that the administrative requirements and required actions for a possible unmonitored release are met. Therefore, no Unreviewed Safety Question is involved with this change.

CHANGE TITLE

1OM 6.4.AN, Returning an RCS Loop to Service with Fuel in the Vessel

CHANGE

This change revises 1OM-6.4.AN to allow for the optional use of vacuum assisted filling of an isolated, drained Reactor Coolant System (RCS) loop.

No Unreviewed Safety Question is involved with this change because the RCS loop stop valves, RCS piping, RCP seals, and Steam Generator tubes are adequately designed to withstand the effects of full isolated loop vacuum. Once the loop is filled and its vacuum has dissipated, the loop's return to service will proceed normally. Since this procedure uses the same fill pathways that have been successfully used in the past and pressures will be maintained well within the design limits of the RCS and its connected components, this change does not constitute an Unreviewed Safety Question.

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CHANGE TITLE

1OST-46.1(2), Post DBA Hydrogen Control System

CHANGE

This change revised 1OST-46.1(2) to require that the flow rate of greater than or equal to 50 SCFM by using an anemometer to measure the recombiner flow since the flow element was found to be inaccurate.

The revised testing method is more accurate than the original design. There are no physical changes to the plant based on this change. The method of Hydrogen removal from the containment building is not affected by this change, therefore, this change does not constitute an Unreviewed Safety Question.

CHANGE TITLE

1/2TOP 99-03, Discharging the Unit 2 Gaseous Waste Surge Tank to Atmosphere for Maintenance

CHANGE

This Temporary Operating Procedure (TOP) provides instructions to discharge the Unit 2 Gaseous Waste Disposal System surge tank to atmosphere by way of the Unit 1 Gaseous Waste Disposal System disposal header. This TOP is intended for use when oxygen is a concern in the Gaseous Waste Disposal System.

Discharging the Unit 2 Gaseous Waste Disposal System surge tank directly to the atmosphere by way of the Unit 1 disposal header does not increase the probability of an accident previously analyzed. The previously analyzed accidents are enveloped by Unit 2 UFSAR 15.7.1, "Waste Gas System Failure," and Unit 1 UFSAR 14.2.3, "Accidental Release of Waste Gases," therefore, this temporary procedure does not involve an Unreviewed Safety Question.

CHANGE TITLE

1TOP-99-01, Individual Response Testing Of Selected Condenser Steam Dump Valves

CHANGE

This Temporary Operating Procedure (TOP) was written to verify proper automatic operation of the first bank of condenser steam dumps by installing non-intrusive temporary pressure gauges and valve stem position indicators on the valve to be tested. This will allow monitoring of air supply pressure to the valve and position of the valve stem. The TOP fails air to all but one condenser dump valve in the bank being tested, and tests the valves in the bank one at a time and thereby eliminates the possibility of more than one condenser dump valve failing open.

Failures in mid-position are bounded by the open failure case. Closed failures are already assumed in all the accident analyses by assuming their unavailability for the accident and relying on the Steam Generator (SG) safety valves. Any failure of a single condenser steam dump valve has already been considered in the accident analysis. All condenser steam dump control features will be operated as designed and no safety settings will be defeated or disabled during valve testing. The isolation of air to the non-tested valves in the bank will not affect the overall operation of other steam release paths (steam dumps, SG atmospheric dump valves or SG safety valves), and the plant design has remained unchanged. Therefore, this change is not an Unreviewed Safety Question.

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CHANGE TITLE

1TOP-99-05, Trouble Shooting Gaseous Waste Disposal System Leakage

CHANGE

This Temporary Operating Procedure (TOP) provides a method for attempting to identify gas leaks in the Gaseous Waste System. A leak test panel used to measure Type C penetration leakage will be connected to the Gaseous Waste System surge tank to measure leakage.

The Gaseous Waste Disposal System is removed from service for the test, no activity is added to the isolated portion of the system during the test, pressure relief protection for installed components remains in place, and the system can be restored to service at any time. Also, the potential activity released is no higher than that which would be present during normal system operation. The systems affected by the test are protected by rupture disks and/or relief valves. Monitoring for the presence of an explosive gas mixture is done by relying on the provisions of the action statement of Technical Specification 3.3.3.11. Therefore this temporary operating procedure does not involve an Unreviewed Safety Question.

CHANGE TITLE

BASES 3.1.2.8, BVPS Unit 1 Tech Spec Bases 3.1.2.8 for RWST Volumes

CHANGE

The Bases section of the Unit 1 Technical Specifications 3/4.1.2.8 was revised concerning its reference to the Refueling Water Storage Tank (RWST) volume values. Confusion between the minimum total volume of 439,050 gallons and minimum design basis usable volume of 430,500 gallons existed.

The Technical Specification Bases was revised to clarify the minimum total volume and the minimum design basis usable volume. No physical changes are being made to the operating characteristics of the RWST. This change clarifies the wording within Technical Specification 3.1.2.8 Bases so that the current design basis values for RWST volume is properly referenced. Therefore this change does not represent an Unreviewed Safety Question.

CHANGE TITLE

DCP 1987, Pressurizer Back-Up Heater Control Circuit

CHANGE

DCP 1987 modified the control circuits for the Pressurizer Back-up Heater Groups D & E so that the heaters will be de-energized on either a Containment Isolation Phase B (CIB) signal or upon the start of the Quench Spray pump on the same bus. The heaters will be prevented from being energized as long as a CIB signal is present or the Quench Spray Pump is running to avoid overload of the 480 volt buses. Also, this change added a five second delay in the start of Quench Spray Pumps 1A & 1B to allow Quench Spray discharge valves 101A and 101B time to unseat and begin to open.

The failure of one or more of the pressurizer back-up heaters will not result in a design basis accident, nor are they required to mitigate a design basis accident. Delaying quench spray flow by five seconds was analyzed and will not affect the containment depressurization system or peak containment pressure. Also, this change eliminated a potential 480V bus overload condition. Therefore, this change is not an Unreviewed Safety Question.

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CHANGE TITLE

DCP 2014, Replacement of Relief Valves RV-IA-107A, B, C, D, & E

CHANGE

Instrument Air Relief Valves RV-IA-107A, B, C, D, & E, did not meet the system operating requirements and were replaced. These relief valves are required for flood prevention of the main intake structure watertight doors. Also, relief protection to protect against overpressurization of the watertight door seals, was changed from 75 psig to 85 psig.

This change improved the overpressurization protection of the intake structure watertight doors. The change in operating pressure of the newly installed relief valves was reviewed and found to be acceptable. This change did not affect the design function of the flood protection equipment of the main intake structure and therefore is not an Unreviewed Safety Question.

CHANGE TITLE

DCP 2282, Installation of a Permanent Reactor Cavity Water Seal

CHANGE

DCP 2282 installed a new permanently welded in-place reactor cavity water seal (RCWS) and new upper supplementary neutron shield segments. The welded seals replaced the existing inflatable rubber seals, and eliminated the necessity for the installation and removal of these seals prior to each flooding and subsequent draining of the refueling canal.

The permanent RCWS was designed to accommodate the cyclic loading from heatup and cooldown cycles, and from seismic cyclic loading during operation and refueling. During refueling operation the RCWS will provide a zero leakage barrier. The fuel movement path across the RCWS was identified and re-enforced to withstand the impact of dropping a fuel assembly without rupture or perforation of the seal membrane and no structural damage occurring to the structural support plate. During non-flooded conditions, airflow channels are provided to allow RV cavity cooling air to exit at the top of the RV annulus. Analysis identifies a slightly higher airflow rate than allowed by the existing configuration. The reactor cavity embedment ring and the refueling ledge on the RV serve as the support for the existing seal plate and shielding, and will provide support for the permanent RCWS and neutron shielding. The permanent RCWS and neutron shielding shall impose no adverse effects on the embedment ring, reactor cavity floor, RV or RV support per the applicable analysis. The permanent seal plate and neutron shielding will perform the same function as the existing design with enhancements, which increases its reliability. Therefore, this change is not an Unreviewed Safety Question.

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CHANGE TITLE

DCP 2364, Solid State Protection System Improvements

CHANGE

This DCP eliminates the RCS Loop Stop Valve Position interlock to SSPS which defeats the Lo-Lo SG Level Reactor Trip and Lo Steamline Pressure SI functions for the isolated steam generator since BV1 is not licensed to operate with a loop isolated. This DCP removes incandescent lamps, adds LEDs and adds a time delay relay in the Safeguards Test cabinets which prevents a relay race from occurring between the interlock and test relays.

Replacing incandescent lamps with LEDs provides internal resistance inherent in LEDs that limits the current if a short circuit occurs in the LED. Existing failures in the base of the LED are similar to incandescent lamps. Removing the neon lights that indicate 120 VAC Channel power is available eliminates a load on the channel that is unnecessary since status lights in the control room perform the same function.

The addition of the interposing time delay relay in the Safeguards Test Cabinet prevents a relay race from occurring between the existing interlock relay and the latching test relays by allowing enough time for the test relay contacts to stabilize in the operate position. The time delay is of no consequence and there are no new failure modes associated with this change. This design change does not result in an Unreviewed Safety Question.

CHANGE TITLE

DCP 2375, Replacement of Non-Conforming Expansion Joints

CHANGE

This DCP changed two Reactor Plant Component Cooling (CCR) System expansion joints, which were not in compliance with ANSI B31.1-1967 thru Addendum 'S71, with Category 1 expansion joints. Piping supports were modified to accommodate the new expansion joints, as well as temporary removal of equipment to gain access to the expansion joints. This change also added two new high capacity drain valves, one drain valve to accommodate valve leakage and one vent valve.

The expansion joints comply with the requirements of Piping Code ANSI B31.1-1967 thru Addendum 'S71 such that they are designed to maintain pressure boundary integrity during a seismic event. Valve material changes were also reviewed and found acceptable for use in the CCR system. The CCR system is not used for accident purposes and is not considered part of the engineered safety features. Therefore, this design change does not result in an Unreviewed Safety Question.

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CHANGE TITLE

Evaluation of Foreign Object - Reactor Vessel Lower Internals

CHANGE

During the 2R07 refueling outage at Beaver Valley Unit 2, a foreign object was observed on the lower core plate during a remote inspection. Attempts to retrieve the object were unsuccessful and resulted in the object falling into the reactor vessel lower internals.

Observations of the foreign object on the lower core plate allowed a comparison to the flow holes in the core plate. This observation results in an estimated length of 1.5 to 2 inches long. The object is plate-type shaped and is approximately 1/2 inch wide and 1/16 inch thick.

The presence of the foreign object in the primary system at Beaver Valley Unit 2 has been evaluated. As documented in Westinghouse evaluation SECL-99-030, Beaver Valley Unit 2 Foreign Object – Reactor Internals, the most probable scenario is that the foreign object will be trapped under the fuel and held in place by Reactor Coolant System (RCS) flow. The foreign object is likely to be trapped because the flow holes in the assembly are smaller than the estimated dimensions of the foreign object. This evaluation concludes that plant components and safety systems will not be adversely affected during normal operation and accident conditions due to the presence of the foreign object. The presence of the foreign object in the reactor vessel lower internals does not represent an Unreviewed Safety Question.

CHANGE TITLE

Evaluation of Checksource Function for Post-Accident Sampling System Sample Box Ventilation Monitors RM-1PAS-5A and RM-1PAS-5B

CHANGE

This evaluation allows manual checksourcing of the RM-1PAS-5A and RM-1PAS-5B Post-Accident Sampling System Sample Box Ventilation Monitors when required to operationally confirm monitor response to an actual radioactive source.

The detectors used for RM-1PAS-5A and RM-1PAS-5B Post-Accident Sampling System Sample Box Ventilation Monitors may or may not be supplied with an optical checksource designed to perturb the instrument channel from the detector photo-multiplier tube to the instrument's indication. This evaluation finds acceptable the more comprehensive method of causing this perturbation by placing a radioactive source near the detector to indicate a response, where the detector's entire assembly is included in an operational verification. The checksourcing method does not affect detectors, nor their function during an accident. Use of a comprehensive substitute method for verifying detector response to radiation was evaluated to not present an Unreviewed Safety Question.

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CHANGE TITLE

LRM 1-19, Licensing Requirements Manual

CHANGE

Axial Flux Difference (AFD) and Quadrant Power Tilt Ratio (QPTR) monitor alarm information was added to the Licensing Requirements Manual (LRM) contains similar technical information previously included in the Technical Specifications with minor format numbering differences to be consistent with the LRM format.

The NRC approved a Technical Specification amendment to remove the AFD and QPTR monitor alarm information, with the understanding that it would be included in the LRM. Therefore this addition is not an Unreviewed Safety Question since the information transfer to the LRM was reviewed and approved in Technical Specification Amendment No. 225.

CHANGE TITLE

LRM 1-20, Table 5.1-1, Containment Isolation Valves

CHANGE

The changes to Licensing Requirements Manual (LRM) Table 5.1-1 includes correcting typographical errors, adding notes to identify hydrostatic tested containment isolation valves, adding notes to clarify the testing of containment isolation valves associated with the personnel air lock, and that periodic Type B and Type C tests will continue to be conducted in accordance with the guidelines of 10CFR50, Appendix J, Option B.

Since the changes correct a typographical error, provide clarification of the description of containment isolation valve leakage testing, and do not affect the design or performance of plant equipment, no Unreviewed Safety Question is involved.

CHANGE TITLE

LRM 1-21, Licensing Requirements Manual

CHANGE

This revision revised the Licensing Requirements Manual (LRM) to clarify the current wording in the Bases Section B.5.1 on Containment Penetrations.

This revision added further detail in order to clarify the current Bases information on Containment Penetrations to avoid potential reader misinterpretation. This revision is not a technical change, only an administrative change to clarify the current LRM requirements. Therefore this change is not an Unreviewed Safety Question since no new criteria is added/deleted nor are any current requirements changed.

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CHANGE TITLE

LRM 1-22, Licensing Requirements Manual

CHANGE

This revision added operating criteria for the atmospheric steam release valves on the steam generators to the Licensing Requirements Manual (LRM). This additional criteria added to the LRM acknowledges the safety significant role that the atmospheric steam release valves perform in UFSAR safety analyses and ensures that the unit is operated consistent with those UFSAR safety analyses assumptions. The new operating criteria for these valves is consistent with the description currently provided in the UFSAR and thus no UFSAR changes are necessary.

The criteria is consistent with the information currently used and described in the UFSAR. No changes were necessary to the UFSAR for either the current information on the description of these atmospheric steam release valves or how they are used in design basis accident safety analyses since the current UFSAR information is accurate with regard to the new LRM information. Therefore this change is not an Unreviewed Safety Question.

CHANGE TITLE

Maintenance Programs Unit Administrative Manual, (MPUAM) 4.10, Fuel Repair and Inspection Boxes-Heavy Loads Safe Load Paths

CHANGE

This change permits the movement of fuel inspection and reconstitution equipment to the staging area in the fuel building. The safe load path would be exactly the same as that of a storage cask, except it would permit the equipment being staged on the Cask Pit and the Fuel Transfer System Canal.

All the boxes lifted over the fuel pool are less than both the 3000 lbs. Technical Specification criteria and the 2450 lbs. heavy loads criteria. Care is taken in the protection of the air lines to the weir gates and the load is never over safety related piping or fuel. Since existing heavy loads pathways are used and this change simply adds specific items to be moved in the heavy loads pathway, no changes to the safety analyses accidents are affected. Therefore, no Unreviewed Safety Question exists.

CHANGE TITLE

Nuclear Power Division Administrative Procedure, NPDAP 3.5, Fire Protection, Revision 9

CHANGE

This change revised the fire rated assembly operability and surveillance requirements to differentiate between safety related areas and non-safety related areas.

The change was editorial in nature and did not adversely affect the ability of the plant to achieve and maintain safe shutdown. Also, this change is applicable to non-safety related fire areas which do not contain safe shutdown equipment components. Therefore, this change is not an Unreviewed Safety Question.

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Nuclear Power Division Administrative Procedure, NPDAP 3.5, Fire Protection, Revision 10

CHANGE

This change revised NPDAP 3.5 to address issues identified by assessment of the Unit 2 FPS Surveillance requirements. The changes principally provided for better compliance with NFPA codes and NEIL insurance requirements. Also, operability requirements were added for Back-up Indicating Panel (BIP) and Alternate Shutdown Panel (ASP), and editorial/administrative changes were made to address BVPS changes in the work control process, changes to 29CFR1910, and other site administrative changes.

The changes affected administrative controls of the Fire Protection Program, and did not change the plant design or how the plant operates during a design basis fire scenario. The changes to the Fire Protection Program are consistent with NFPA code guidance and NEIL insurance requirements. Therefore, this change is not an Unreviewed Safety Question.

CHANGE TITLE

Temporary Modification 1-99-01, Temporary Modification For Leak on WCL-15

CHANGE

A Filtered Water pipe leak developed on filtered water piping [WCL-15] between the Filtered Water Storage Tank, [WT-TK-9] and the Softener Pump Suction Tank, [WT-TK-7]. A red rubber patch was banded around the pipe to contain the leakage until permanent repairs can be performed.

This temporary red rubber patch was installed on a non-safety related filtered water pipe [WCL-15]. This temporary modification will remain installed until permanent repairs can be made. A failure of the red rubber patch will pose no safety concern, and would amount to no more than a housekeeping issue. Since the repaired piping has no safety function, there is no Unreviewed Safety Question involved.

CHANGE TITLE

Temporary Modification 1-99-02, Temporary Fire Protection Sprinkler System For Craft Entry Structure

CHANGE

A temporary sprinkler system was installed in the craft entry structure located on the west side of the Unit 2 PAB. The sprinkler system was connected to the Fire Protection System yard loop through a Unit 1 fire hydrant.

The installed additional piping, including the fire hose connection to the yard loop, meets the Fire Protection System design pressure of 175 psi. The temporary sprinkler system complies with the guidance of NFPA 13 "Sprinkler Systems" (except for the fire hose connection to the loop) and sprinkler loading is within the capacity of either fire pump. Therefore, the fire protection system design basis is preserved, and no Unreviewed Safety Question exists.

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CHANGE TITLE

Temporary Modification 1-99-03, Replacement of BVPS-1 Control Room Pressure Boundary/Fire Door S25-3

CHANGE

The BVPS Unit 1 Control Room south stairwell cable tray mezzanine access door, S25-3, is a security card reader and fire door. This temporary modification permitted its removal and replacement during repair activities. The access door isolates the control room from the cable tray mezzanine, and thus forms a portion of the control room pressure boundary. The change provided an alternate but equivalent method of retaining the control room pressure boundary while the door was replaced.

The alternate sealing method used to isolate the control room from the cable tray mezzanine provided the same sealing function as access door S25-3. Since the CO2 system in the cable tray mezzanine was removed from service, a fire watch was established. The plant response to control room isolation remained as designed. The door replacement activity did not modify the control room isolation signals. The alternate sealing method was equivalent to the sealing function door S25-3 provided as a portion of the control room pressure boundary. The functional capability of the control room pressure boundary was maintained during this temporary modification. Therefore the door replacement is not a degraded or nonconforming condition, and is not an Unreviewed Safety Question.

CHANGE TITLE

Temporary Modification 1-99-05, Temporary Clamp for EHC Piping

CHANGE

This temporary modification installed a clamp to retain EHC piping in the event of failure. The piping currently had a leak at a welded connection. A clamp was installed to hold the 1/2" tubing in the Tee fitting.

The affected system (EHC / Turbine Controls) is not safety related and has no affect on any safety related components or equipment important to safety. Therefore, an Unreviewed Safety Question is not involved with this change.

CHANGE TITLE

Temporary Modification 1-99-08, Temporary Leak Repair of Manway Flanged Joint on Cross-Under Piping to [1MS-E-1D] Moisture Separator Reheater

CHANGE

This temporary modification placed leak repair on the leaking manway flanged joint on the cross-under piping between the [MS-T-1] high pressure turbine and the [MS-E-1D] moisture separator reheater (MSR). This temporary modification replaced the existing twenty (20) bolts on the manway flange with studs (10 slotted and 10 standard) and seal injection cap nuts.

A metallic strap was installed by the vendor as a precautionary measure to act as a flange joint seal in the unlikely event of the flanged joint gasket failure. This leak repair was reviewed and it was determined that the method of leak repair was acceptable since the joint closure force is maintained. This use of leak repair will not affect any of the UFSAR accident analyses and is not an Unreviewed Safety Question.

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CHANGE TITLE

Temporary Modification 1-99-10, Temporary Leak Repair of Body to Bonnet Leak on Valve [BD-19]

CHANGE

This Temporary Modification placed leak repair on valve [BD-19], which is a 3-inch, carbon steel gate valve manufactured by Pacific Valves. The "leak seal" enclosure consists of the valve bonnet as well as the injection valves. The closed disc of valve [BD-19] will be the barrier to prevent sealant injection into the active blowdown system.

The installation of the injection valves and sealant was evaluated and determined to be acceptable. A review of the stress and the additional weight of the injection valves and sealant was performed. The addition of this leak repair will not affect any of the UFSAR accident analyses and is therefore not an Unreviewed Safety Question.

CHANGE TITLE

TER 6067, Reclassification of Control Room Air Conditioning Condensers VS-E-4A&B from QA Category 1 to 2.

CHANGE

This change reclassified the control room air conditioning condensers VS-E-4A&B from QA Category 1 to QA Category 2.

These condensers do not provide any safety related cooling functions. An analysis of the function of these units determined that condensers were never required to be QA Category 1. These units provide the passive support for operator comfort, but provide no active roll for any UFSAR safe shutdown analyses. Therefore, this change is not an Unreviewed Safety Question.

CHANGE TITLE

TER 12005, Overtemperature Delta T and Overpower Delta T Evaluation

CHANGE

This change established administrative controls that were more conservative than Technical Specifications to ensure design limits for Overtemperature Delta T (OTdT) and Overpower Delta T (OPdT) are not exceeded. This change also established an increased safety analysis limit for the OTdT trip function.

No plant equipment was affected by this change. The revised safety analysis limits for the OTdT trip function were reanalyzed and met all accident analyses acceptance criteria. The reactor protection system will continue to function as designed and provide protection against all core and reactor coolant system safety limits. Therefore, this change is not an Unreviewed Safety Question.

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CHANGE TITLE

TER 12407, Replacement Source & Intermediate Range Start-Up Rate Meters

CHANGE

Eight start-up rate meters were replaced with a similar meter with an expanded range. This change was done to eliminate a problem with some of the meters where the meter pointer would get stuck when driven to its mechanical stop on the end of the scale. The range of the meters is specified in the UFSAR for the control room benchboard indicators.

The meters are non-safety related and provide indication only. Electrically, the meters are isolated by isolation amplifiers from the safety related circuits of the nuclear instrumentation system. No credible malfunction or failure of a meter will affect any safety related equipment or component. It can be concluded, therefore, that no Unreviewed Safety Question will result from replacing the meters with similar meters with an expanded range.

CHANGE TITLE

TER 12730, Modification of BVPS Administrative Limit for RCS/PRZR Cooldown

CHANGE

TER-12730 changed the administrative cooldown rate from 50 degrees F/hr to 90 degrees F/hr while cooling down from Hot Zero Power (HZP, 547 degrees F) to 200 degrees F. In addition, the current Pressurizer cooldown rate changed from 100 degrees F/hr to 180 degrees F/hr during all cooldown modes. The current Technical Specification limits for the RCS and pressurizer are 100 degrees F/hr (TS 3.4.9.1.b) and 200 degrees F/hr (TS 3.4.9.2.b) respectively.

Eliminating the cool-down rate limit (from HZP to 200 degrees F), resulted in increased decay heat load when entering Mode 4. The systems heat removal capability was found to be adequate for this increased cool-down evolution through flow adjustments to the CCR / RHR heat exchangers and the availability of the steam dumps. There is no effect on the Design Basis accidents or increase in consequences of any DBA as a result of this change. In addition, there is no potential for creation of a new type of unanalyzed event, and no impact on margin of safety. Therefore, this change does not represent an Unreviewed Safety Question.

CHANGE TITLE

TER 12741, RCP Operation During Water Solid Conditions

CHANGE

This TER evaluated RCP operation during water solid conditions. This change permits the collapse of the steam bubble during Mode 5 while an RCP is in operation.

The method of collapsing the steam bubble follows the guidance provided under WCAP-13588 (Modified Steam Bubble Method). This method of operating one RCP during water solid conditions remains within the current design requirement and the licensing basis requirements. There is no effect on the Design Basis accidents or increase in consequences of any DBA as a result of this change. In addition, there is no potential for creation of a new type of unanalyzed event, and no impact on margin of safety. Therefore, this change does not represent an Unreviewed Safety Question.

CHANGE TITLE

TER 12798, COLR Changes to Reduce Fq Limit from 2.4 to 2.3

CHANGE

This TER implemented Administrative Controls to reduce the Fq limits from 2.4 to 2.3 in the Core Operating Limits Report (COLR). This change is being made to recover Large Break LOCA Peak Clad Temperature (PCT) margin lost due to an error in calculation of fuel and cladding temperatures discovered by Westinghouse in the LOCBART code.

This change has been evaluated by Westinghouse and reviewed by BVPS. Reduction in Fq limits provide a net benefit of 100 degrees Fahrenheit in PCT reduction to offset PCT penalties assessed per 10CFR50.46(a)(3) of 87 degrees Fahrenheit. Westinghouse has reviewed the change and has verified, via review of flux maps taken to date, that prior operation of the current fuel operating cycles has been within the limits. Since the administrative limits are more restrictive and do not negatively affect UFSAR accident analyses, an Unreviewed Safety Question does not exist.

CHANGE TITLE

TER 13077, EDG Initial Load Starting Capability

CHANGE

This change revised the initial load starting capability of the EDG based upon current plant configuration and removed outdated load starting text from the UFSAR. The original load starting capability was based on a three step load sequencer. The load sequencer was changed from three steps to six steps.

This change removed inaccurate information from the UFSAR and is editorial in nature. The loading characters of the EDG are not affected by this change. EDG performance was evaluated in analysis 8700-E-241 Rev. 1 and were found acceptable. Therefore, this change is not an Unreviewed Safety Question.

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CHANGE TITLE

TER 13101, BVPS-1 Cycle 14 Reactor Core Fuel Reload Evaluation

CHANGE

This TER documented the effects of the changes to the reactor core for Cycle 14 operation. The Cycle 14 core configuration features a low-low-leakage loading pattern (L4P) designed to meet a cycle length of 470 Effective Full Power Days (EFPD). Also, several fuel assembly design changes are being implemented.

The reload design change meets the existing core design requirements and no accidents described in the UFSAR are adversely affected by this change. The Cycle 14 reactor core reload design was performed in accordance with Westinghouse methodology as licensed by the NRC. All functional and structural integrity requirements will be retained by the assemblies. Therefore, this change is not an Unreviewed Safety Question.

CHANGE TITLE

Updated Fire Protection Appendix R Review, (UFPARR)-BV-1 Section 11.18, Exemption Request 11.18 Fire Door Inconsistency

CHANGE

The BVPS-1 Updated Fire Protection Appendix R Review Section 11.18, "Fire Doors" was revised to recognize that fire door S13-4 (double door entry to the Control Room HVAC Room, Service Bldg. Elev. 713) upgraded with the associated door leaves that have approved UL labels. The BVPS-1 Updated Fire Protection Appendix R Review Section 11.18, "Fire Doors" recognized this deviation and provided justification for acceptability for the frame assembly (Group 1 Section) but also identified that the door leaves would be replaced with UL labeled doors in the future. This deviation was subsequently approved by the NRC.

The above fire door deviation was previously reviewed and accepted by the NRC (Ref. SER dated 12/4/86, "Beaver Valley Unit 1 - Transmittal of Fire Protection Technical Exemption". The new fire door leaves will resolve the need for the fire door deviation in the BVPS-1 Updated Fire Protection Appendix R Review Section 11.18, "Fire Doors" by having the necessary UL labels. Therefore, this change is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 7.3.2.1.5, Testing During Shutdown

CHANGE

UFSAR Section 7.3.2.1.5 was revised to delete the last sentence of paragraph one (Testing During Shutdown). This sentence was incorrect and the revised text satisfactorily explains the testing of the ECCS system.

The change does not affect any equipment or equipment operation or system configuration in any way that would affect the Licensing or Operational conditions. Therefore, no Unreviewed Safety Question exists.

CHANGE TITLE

UFSAR Change, Section 9.4.3.1, Revision to "Postulated Failures of Component Cooling Water Piping"

CHANGE

This change clarified and simplified the "Postulated Failures of Component Cooling Water Piping" portion of this UFSAR section. This section was not part of Section 9 of the original FSAR. It was created during the incorporation of AEC questions 9.10, 9.11, 9.13, 9.14, 9.33, 9.34, 9.35, and 9.36 into the UFSAR Section 9.4.3.1. In addition to the simplification and rearrangement of the existing text, the references to RTDs in the reactor coolant pump bearing housings were corrected to reflect that the monitoring instrumentation uses thermocouples. This portion of the change is consistent with the existing UFSAR Figure 4-1, sheet 1.

Although the Component Cooling Water subsystem is required for the normal operation of various safety related components, its operation is not required to prevent or mitigate any accident described in the UFSAR. Failure of the Component Cooling Water subsystem may necessitate shutdown of the unit, but is not an initiating event to any accident. Therefore, no Unreviewed Safety Question is created by the removal of excessive detail in the description of the failure of the component cooling water subsystem.

CHANGE TITLE

UFSAR Change, Table 6.4-1, Quench Spray Subsystem Component Design Data

CHANGE

The UFSAR change was made to change the material of the four Chemical Injection Pump shafts from ASTM A-582 Type 316 to ASTM A-582 Type 416.

This change properly documents the material specification to which the pump shafts were designed and fabricated in the UFSAR. The performance of the pumps will not be affected in any manner. Using type 416 stainless steel for a pump shaft is specified by the pump manufacturer. Since this change does not affect the operation of the Chemical Injection Pumps, no Unreviewed Safety Question exists.

CHANGE TITLE

UFSAR Change, Revision to BVPS-1 UFSAR to Clarify Appropriate Combinations of Accidents with Earthquakes

CHANGE

This change incorporates licensing/design bases statements into the UFSAR. These statements clarify the design bases assumptions regarding the simultaneous imposition of a limiting seismic event (termed a Design Basis Earthquake [DBE] at BVPS-1 with a Design Basis Accident (DBA), by explicitly stating no such simultaneous DBE/DBA is assumed for accident analysis purposes.

Since these are additional clarification and do not impact any assumptions or statements in the UFSAR, this change does not constitute an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 9.1.2.4, Boric Acid Tank Removal

CHANGE

This UFSAR change deletes reference to the 35,000 gallon Boric Acid Hold Tank, and deletes a statement indicating that the capacity of this tank along with the Boric Acid Tanks is sufficient to provide cold shutdown. The affected paragraph describes the capacity of boric acid solution in the Boric Acid Tanks that is adequate to meet the design basis of having 11,336 gallons available for cold shutdown (even if the most reactive control rod is not inserted). The change avoids the possibility of an incorrect conclusion that the Boric Acid Hold Tank must be available for cold shutdown.

The capacity of boric acid solution available in the Boric Acid Tanks or the Refueling Water Storage Tank is adequate to provide the design basis volume required for cold shutdown. The Boric Acid Hold Tank is a possible make-up source to the Boric Acid Tanks, but is not required to be available to meet Technical Specifications requirements. Therefore, this change does not involve an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Table 9.9-6 Revisions

CHANGE

UFSAR Table 9.9-6 "Heat Rate" and "Integrated Heat" values were revised to properly reflect the heat loads for the River Water subsystems.

The UFSAR Table 9.9-6 heat load values for the River Water subsystems heat load requirements are not used for any operational or design basis limits such as procedures, alarms, or setpoint calculations. All related plant parameter criteria identify and/or use the correct design basis heat loads as the foundation for their development. Implementing this UFSAR Table 9.9-6 change to clarify the heat load of these components will strengthen the basis for these requirements. There is no degradation in the level of safety, no change to the radiological consequences of any accident and no Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 7.2.3.3, Periodic Testing of the Process Analog Channels of the Protection Circuits

CHANGE

UFSAR Section 7.2.3-3 was changed to delete reference to the Equipment Supplier as the source of information used to prepare periodic testing of the protection circuits and adds statements indicating that testing is conducted in accordance with the Technical Specifications.

Testing will be performed in accordance with approved procedures and the Technical Specifications. The procedures were not changed as the result of this evaluation. The changes do not change any equipment, equipment operation or system configuration in any way that would affect the Licensing or Operational conditions. Therefore, this change is not an Unreviewed Safety Question.

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CHANGE TITLE

UFSAR Change, Section 6.6 - Supplementary Leak Collection and Release System (SLCRS)

CHANGE

UFSAR Section 6.6.1 was revised to add the steam generator blowdown room, and the purge air duct area to the existing list of areas which are not required to be maintained at 0.125 inch water gauge negative pressure by SLCRS.

SLCRS remains effective for removal of airborne radioactive iodine from areas postulated to be subject to such post DBA conditions. Minimum exhaust flows for heat removal are maintained for vital areas where equipment important to mitigating the consequences of a DBA is located, to assure such equipment is not compromised by excessive temperature. These abilities to protect vital equipment and to directly remove airborne contaminants serve to ensure post DBA dose rates remain below regulatory limits. Original system functions are preserved so that plant design basis is unaffected by this change, and thus, it does not involve any Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 5.4.2.1, Containment Vacuum System.

CHANGE

Measures to ensure personnel safety during containment entries have been deleted from UFSAR Section 5.4.2.1, Containment Vacuum System, pages 5.4-9 and 5.4-10.

The statements related to personnel safety were submitted to the NRC in response to AEC question 7.16 and were added to Revision 0 of the BVPS-1 UFSAR. These statements were deleted because the statements were not necessary to permit understanding of the system designs and their relationship to safety evaluations, and this information is not pertinent to the design basis.

Since the deleted statements did not address the design or operation of systems or their relationship to safety evaluations, their deletion will not affect system design or operation, affect failure modes described in the UFSAR, or create new failure modes. Therefore, no Unreviewed Safety Question is involved.

CHANGE TITLE

UFSAR Change, Component Cooling Water Capability

CHANGE

The BVPS Unit 1 Design Basis Documents and UFSAR contained discrepancies regarding maximum river water temperature. Discrepancies existed between component cooling water capability during normal and cooldown plant operations as described in the UFSAR. This change corrected these inconsistencies.

The changes to the UFSAR are editorial in nature. These changes corrected discrepancies resulting from previously approved increases in the maximum river water temperature (86-90 degrees F). None of the changes adversely affect design basis accidents. None of the previous changes associated with increases in the maximum river water temperature constituted an Unreviewed Safety Question, therefore, these subsequent editorial corrections likewise do not constitute an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, RHR Decay Heat Generation at Specified Time After Reactor Shutdown

CHANGE

The decay heat generation at 20 hrs. after reactor shutdown is stated to be 66.0E6 BTU/HR in the UFSAR, section 9.3.1, and in the Unit 1 Operating Manual. This was changed to 57.0E6 BTU/hr based on new calculations.

The change to the decay heat load at 20 hours after shutdown provides UFSAR consistency with other design basis documents. The change has no impact on equipment design, operation, reliability or failure modes. Therefore, this change does not involve an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, UFSAR Verification Project Open Item Tracking Package No. 1-15-10, UFSAR Clarification

CHANGE

This change to the UFSAR removed a restrictive and all inclusive statement which implied that the materials of construction for all small relief valves consist of stainless steel body and trim and carbon steel bonnet and cap, and that larger relief valves have carbon steel body with stainless steel trim, and that Butterfly valves used in large lines have composition seats and stainless steel trim on the valve disk. Engineering reviews have identified valve specifications that are contradictory to the statements, such as: (1) small relief valves exist which are made with other materials, (2) valve seat material for large butterfly valves is not supported by these specifications and 3) large relief valves are not all provided with carbon steel bodies and stainless steel trim.

These three statements supply detail that is subject to change as conditions dictate and will be evaluated on an individual basis, as required, when valve replacement or change is necessary. The statements add no value and are misleading. Since this change does not affect present plant equipment and any subsequent changes will be individually evaluated for proper material construction, no Unreviewed Safety Question exists.

CHANGE TITLE

UFSAR Change, Section 7.3.2.1.5, Unit Operations and Startup Testing

CHANGE

UFSAR Section 7.3.2.1.5 was changed to specify that test performance be in accordance with the requirements specified in the Technical Specifications. Reference to initial unit operations and startup testing was deleted.

The change did not change any equipment, equipment operation or system configuration in any way. The change did not affect the accident analysis addressed in chapter 14. Also, testing will be performed in accordance with approved procedures and the Technical Specifications. Therefore, an Unreviewed Safety Question is not involved.

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CHANGE TITLE

UFSAR Change, Table 5.3-1, Containment Isolation Arrangements

CHANGE

The classification of penetration 106 in BVPS-1 UFSAR Table 5.3-1 was changed from "A" to "D".

Class A penetration piping is used during unit operation as discussed in UFSAR Section 5.3.2. Penetration 106 piping can not be used during normal unit operation as it would render one or more safety injection accumulators inoperable. All three accumulators are required to be operable during normal unit operation (Modes 1 through 3). The reclassification does not involve any physical change to the plant or its equipment, and Penetration 106 will continue to be in conformance with GDC 56, as indicated in Table 5.3-1. Therefore, changing the classification of penetration 106 from "A" to "D" does not result in an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change Figure 8.1-1, Sheets 1&2, Electrical Line Diagram

CHANGE

These changes modified UFSAR Figure 8.1-1, sheets 1 & 2. The change to Figure 8.1-1, sheet 1 adds a circuit from the 4160 V Bus to the Administration Building 480 V Substation 1-10 in accordance with DCP-146. Sheet 2 is revised to change the terminology from "load center" to "substation" and to identify the substation numbers and locations in accordance with the reference drawing.

These changes provides consistency between the UFSAR figures and the control drawings, and the changes do not affect the design or function of the 4160 V Distribution System. Also, the changes are administrative; there are no physical changes being made to the Station. Therefore, this change is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 9.5.2, 9.5.3, Fuel Pool Level and Temperature Alarms

CHANGE

UFSAR Sections 9.5.2 and 9.5.3 were revised to delete reference to local Spent Fuel Pool temperature and level indication and/or alarm. These parameters were not included in the original design concept (DCP 97) and the recommended UFSAR text changes reflect the original design concept.

The changes do not affect any equipment or equipment operation or system configuration in any way that would affect the Licensing or Operational conditions. The changes do not affect any accident analysis addressed in Chapter 14. Upon receipt of a spent fuel pool high temperature and/or high or low level alarm in the Control Room, appropriate procedures are in place to advise operating personnel of the problem and to provide the necessary instructions to dispatch personnel to the fuel pool area to restore the alarmed condition to normal. Therefore, this change is not an Unreviewed Safety Question.

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CHANGE TITLE

UFSAR Change, Chapter 6, Section 6.4.2, Page 6.4-5

CHANGE

Operation Manual 1OM-13.4 allows for the use of the Low Head Safety Injection Pumps to prevent the (Refueling Water Storage Tank) RWST from freezing. This option was not described in the UFSAR. The change incorporated this option into the UFSAR.

The change did not make any physical changes to the Low Head Safety Injection (LHSI) pumps or the RWST. It rather provided an alternate method of heating the RWST by aligning the LHSI pumps in their recirculation configuration should the refueling water recirculation pumps be unavailable. The LHSI pumps are routinely aligned in the recirculation configuration to satisfy a Technical Specification Surveillance Requirement. Receipt of a SI signal during such a configuration will automatically re-align the valves to the accident configuration thereby assuring the accident mitigation configuration and the margin to safety. The change does not result in a Unreviewed Safety Question because the change does not introduce any new failure modes or malfunctions or increase the probability or consequences of an accident presently evaluated in the UFSAR.

CHANGE TITLE

UFSAR Change 1-10-9, Section 9.3.3.2

CHANGE

The change revised the UFSAR text description of Residual Heat Removal (RHR) System piping. The UFSAR text indicated that piping was welded except at flanged connections of the flow control valves and the relief valve. The revised text states that "Welded construction is used extensively throughout the system to minimize the possibility of leakage from pipes, valves, and fittings."

No physical changes are associated with this text change. The change does not affect the piping system design criteria document (ANSI B3 1.1) specified in UFSAR Section 9.3.1 (RHR) Design Basis. Performance of the RHR system will not be affected, since welded construction will continue to be used extensively throughout the system to minimize the possibility of leakage. Therefore, this change is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 9.4.4, Revision to Component Cooling Water "Availability and Reliability"

CHANGE

This change revised portions of the Component Cooling Water "Availability and Reliability" description to remove a level of unnecessary detail and to better focus on the topic of the discussion.

Although the Component Cooling Water subsystem is required for the normal operation of various safety related components, its operation is not required to prevent or mitigate any accident described in the UFSAR. Failures in the Component Cooling Water subsystem may necessitate shutdown of the unit, but are not an initiating event to any accident. Therefore, no Unreviewed Safety Question is created by the removal of excessive detail in the description of the system availability and reliability.

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CHANGE TITLE

UFSAR Change, UFSAR Verification Project Closure Package No. 1-30-35

CHANGE

This change replaced UFSAR River Water Figures 9.9-1 A through D, and 10.3-3B with a simplified figure in order to remove excessive detail from the UFSAR. Various changes to the UFSAR text were made to delete reference to the figures or to reference the simplified figures.

The simplified figures replaced excessively detailed figures which contain information that was not necessary for the reader to understand the system design and its relationship to safety evaluations. No physical plant changes were made by this change. Therefore, an Unreviewed Safety Question is not involved with this change.

CHANGE TITLE

UFSAR Change, Section 11.5.4.1.7, Health Physics Procedures Radiological Training

CHANGE

The prescriptive frequency (at least biennially) for verification of the competency with regard to radiological practices for individuals who are granted unescorted access was eliminated from the UFSAR. The specific details for the implementation of the radiological training will reside in the Nuclear Training Administrative Manual. Further evaluation of the specifics for implementation of the radiological training will be performed under the Systems Approach to Training.

The reference to a biennial frequency was a historical description of the implementation of radiological training. 10CFR19.12, Instructions to Workers, provides the requirements for radiation worker training. However, 10CFR19.12 does not contain any reference to a prescriptive frequency for conduct of the training. Section 11.5.1 defers overall responsibility for the health physics program to Unit 2 UFSAR section 12.5.1, Health Physics Program Organization. Responsibility for the Unit 1 radiological training area is assigned to an individual responsible for radiological operations at Unit 1. This responsibility will remain unchanged, although the organizational title has been revised. This change does not represent an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, UFSAR Verification Project Closure Package No. 1-34-4

CHANGE

This change replaced UFSAR Station Air, Instrument Air and Containment Instrument Air Systems Figures 9.8-1, 9.8-2, and 15-2A with a simplified UFSAR figure. One change to the UFSAR text was made to reference the simplified figure.

The simplified figure replaced excessively detailed figures which contain information which is not necessary for the reader to understand the system design and its relationship to safety evaluations. No physical plant changes were made by this change. Therefore, an Unreviewed Safety Question is not involved with this change.

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CHANGE TITLE

UFSAR Change, UFSAR Verification Project Change Package No. 1-44-14

CHANGE

The change simplified UFSAR Figure 9.13-3, Ventilation Systems, Control Room Area. The change removed excessive detail from UFSAR Figure 9.13-3 which is not necessary for the reader to understand the system design and its relationship to safety evaluations. The changes included all valves shown open and administrative controls not shown on the figure.

The UFSAR text adequately describes system operation and design parameters; UFSAR Figure 9.13-3 contained redundant information to that described in the UFSAR text. The simplified figure replaced excessively detailed figures. No physical plant changes were made. Therefore, an Unreviewed Safety Question is not involved with this change.

CHANGE TITLE

UFSAR Change, Figure 6.6-1B, UFSAR Verification Project Change Package No. 1-44-13

CHANGE

This change deleted UFSAR Figure 6.6-1B, Decontamination Building Ventilation System.

The change did not affect any design or operating parameters nor does the change affect any accident analysis addressed in Chapter 14. No physical or administrative controls changes are being made to the plant. The figure is not necessary for the reader to understand the system design and its relationship to safety evaluations. Also, the figure is not referenced or discussed in the UFSAR; Ventilation and Radiation Protection are addressed by UFSAR text in applicable sections. Therefore this change is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 9.2.2, Boron Recovery System - Description

CHANGE

Page 9.2-6 contains the following statement which was deleted, due to excessive detail. "At the same time the pumps which have been operating are visually examined."

Specific instructions for operating or monitoring plant equipment are typically maintained in plant procedures, when required. Removing this excessive detail did not result in a Unreviewed Safety Question because the change will not introduce any new failure modes or malfunctions or increase the probability or consequences of an accident presently evaluated in the UFSAR.

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CHANGE TITLE

UFSAR Change, Revision to Component Cooling Surge and Chemical Addition Tank Data

CHANGE

This change clarified and simplified the statements related to the component cooling water chemical addition tank. The capacities of this tank and the component cooling water surge tank as listed in Table 9.4-1 were also revised in accordance with the original capacity calculations.

Although the Component Cooling Water subsystem is required for the normal operation of various safety related components, its operation is not required to prevent or mitigate any accident described in the UFSAR. In addition, these changes do not affect the operation of the component cooling water system. Since this change is editorial and has no impact on safety related equipment, this change is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 9.9.4, UFSAR Verification Project Closure Package No. 1-30-19

CHANGE

This change revised the UFSAR discussion in section 9.9.4, Tests and Inspection, regarding periodic testing of the intake structure fire doors. The change included testing methods and criteria and is identified as supplemental information in regard to the testing of the seals.

This change is supplemental to the information regarding testing of the flood door seals, and design considerations for the vessels are still being stated but without specific design values. The changes are descriptive and qualitative in nature, and therefore the change is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 8.5.2.4, Diesel Generator Building - Failure of One or All of the Air Bottles with Missile Generations from the Bottles

CHANGE

This change clarifies that the air supply line to the diesel generator starting air bottles contains a pressure control set at 200 psig, not that each bottle contains a pressure control. This change also deleted the word "line" in the sentence: "Finally, the main air supply line to the bottles contains a relief valve."

The section of the UFSAR being changed does not discuss the design basis of the bottles, i.e., their capability to start the diesels. The subject of the section being changed is the potential that the bottles may become missiles. The concern therefore is the overpressurization of the bottles and the means by which overpressurization is prevented such that failure of the bottles is not credible. The changes will not result in an Unreviewed Safety Question for the following reasons. There are no equipment changes being made. The bottles are still afforded three levels of overpressure protection. Since this is all directed to preventing the failure mode or malfunction of bottle failure due to overpressurization, there are no new failure modes or malfunctions to be considered. Accident probabilities are not related to how the bottles are protected from overpressurization. The changes will not result in a new accident since missile generation from the bottles has been considered in the UFSAR and, due to the multiple levels of overpressure protection, has been determined to not be credible.

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CHANGE TITLE

UFSAR Change, UFSAR Verification Project Change Package No. 1-22-1

CHANGE

This change replaced UFSAR Figure 10.3-4, Condensate System with one simplified figure. The simplified figure replaces an excessively detailed figure which contained information which was not necessary for the reader to understand the system design and its relationship to safety evaluations.

The change removed excessive detail from a UFSAR figure. No physical plant changes were made. Also, the Condensate System is not a safety-related system. Therefore, an Unreviewed Safety Question is not involved with this change.

CHANGE TITLE

UFSAR Change, Section 9.9.4, Revision to UFSAR Description of Recirculation Spray Heat Exchanger Testing

CHANGE

UFSAR section 9.9.4 includes a discussion of testing to ensure that sufficient river water flow is available to the recirculation spray heat exchangers. This change provides general information on the alignment to be used for the testing and specific instrumentation to be used to verify flow. The change also states that both inlet and outlet flow indicators in the control room are "checked for proper display."

There is no safety significance to the choice of instrumentation used to verify flow. Site administrative procedures ensure that equipment used to obtain data is calibrated. Since adequate flow to the coolers is still verified, there is no affect on the ability of the coolers to perform their safety function. Therefore, an Unreviewed Safety Question is not involved.

CHANGE TITLE

UFSAR Change, Chapters 14, Safety Analysis

CHANGE

UFSAR Section 14.1.4.2 was changed to delete reference to the Technical Specifications since there is no requirement in the Technical Specifications to determine the estimated critical position of the control rods prior to approaching criticality.

Site procedures control the approach to criticality and include provisions to estimate the critical position of control rods. The deleted statement did not provide information related to system performance requirements or evaluations required to show that safety functions would be accomplished. Therefore, an Unresolved Safety Question is not involved with this change.

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CHANGE TITLE

UFSAR Change, Section 6.3.1.2, Revision to ECCS Leakage Discussion

CHANGE

This change removed outdated information in the UFSAR which provided an apparent tie between the offsite dose calculation and an assumption of ESF leakage outside containment of 50 gpm for up to 30 minutes prior to being isolated.

This evaluation addressed only the change to the procedure specified in the UFSAR that required detection and isolation of leaks in the emergency core cooling flow path within 30 minutes. Operating Manual Chapter 9, Reactor Plant Vents and Drains, discusses the means to detect leakage from any source via high sump level alarms. There is, however, no requirement to isolate any leakage within 30 minutes. Leakage from ESF system equipment outside containment would flow to the Auxiliary Building sumps and can be handled adequately by the area sump pumps. Therefore, the time required to isolate the leak has no affect on the probability of any additional failure or the consequences of the LOCA. Therefore, this change does not constitute an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 4.3.4

CHANGE

This change deleted transmitter response time information associated with pressurizer pressure control transmitters in BV-1 UFSAR section 4.3.4. This change also deleted 'typical' time response delay information in BV-1 UFSAR section 7.3.1.2.

These changes are intended to clarify system functional descriptions and eliminate conflicts between typical and required instrument response times. These changes to the UFSAR do not alter the function or design requirements of any components or systems, including those that mitigate accidents. Since there is no change to any component or system function, there is no Unreviewed Safety Question regarding the changes to the UFSAR text.

CHANGE TITLE

UFSAR Change, BVPS-1 UFSAR Description of Peak Containment Temperature Incorrect

CHANGE

This UFSAR change updated the existing text descriptions, table and figures of various UFSAR sections so that the most recent Main Steam Line Break evaluation and results are properly referenced. Calculations were completed in 1991 as an update to incorporate a maximum river water temperature of 90 degrees F and degraded recirculation spray heat exchanger performance capability due to maximum tube plugging. Other ESF/ECCS conditions were also incorporated within this analysis in order to provide the calculation with the most limiting containment transient analysis.

The results of the MSLB analysis show that the containment structure design limits are not violated. Hence, the structural integrity of the containment is not challenged and therefore no new or unanalyzed condition exists by implementing this change. Additionally, the containment tests are based upon the results of the LOCA radionuclide release transient and are therefore not affected by the MSLB analysis. Therefore, no Unreviewed Safety Question exists.

CHANGE TITLE

UFSAR Change, Section 6.3, Emergency Core Cooling System

CHANGE

This safety evaluation addressed the changes contained in UFSAR Verification Project Closure Packages which pertained to the Safety Injection System for BVPS Unit 1.

The UFSAR changes did not involve a physical plant change, a current plant procedure change, or a test or experiment. The changes corrected or clarified the UFSAR text to reflect the as-built plant and current procedures. Since this change represents only clarification of existing text, this change is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, UFSAR Verification Project Closure Package No. 1-6-14

CHANGE

The change replaced UFSAR Figure 4.2-1 depicting the reactor vessel and internals with one simplified figure. The simplified figure replaced an excessively detailed figure. No physical plant changes were made. The only reference to the figure in the UFSAR is on page 4.2-2.

The simplified figure replaced an excessively detailed figure which contains information which is not necessary for the reader to understand the system design and its relationship to safety evaluations. No physical or administrative control changes were made to the plant, only a change to the description of the reactor vessel and internals was made. Therefore, an Unreviewed Safety Question is not involved with this change.

CHANGE TITLE

UFSAR Change, UFSAR Verification Project "UFSAR Change Package Number 1-34-7"

CHANGE

This change replaced the second sentence of the third paragraph of UFSAR section 9.8.1 with "safety related air-operated valves fail in the correct position for assuring required safety functions." The sentence previously stated that all air operated valves fail closed which is incorrect.

The change clarified the UFSAR text with respect to the failure position for air operated safety related valves and is consistent with BVPS response to Generic Letter 88-14. Since no physical or administrative controls changes are being made to the plant with this change, there is no Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 7.1.2.3

CHANGE

UFSAR Section 7.1.2.3, page 7.1-9 was revised to reference the Environmental Qualification Program instead of Table 7.1-3. In addition, Table 7.1-3 was deleted by this change.

The change was administrative only and does not affect any equipment or equipment operation or system configuration in any way that would affect the Licensing or Operational conditions. The change does not affect any accident analysis addressed in Chapter 14, therefore, this change is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Revision to Auxiliary River Water Instrumentation Description

CHANGE

This change revised portions of the Auxiliary River Water instrumentation description to reflect the current as-built control, instrumentation, and annunciation functions.

The auxiliary river water system is designed to provide a source of water in the case that the river water system is unavailable due to a gasoline barge impact with the main intake structure and a resulting explosion. This revision reflects only differences in the instrumentation and annunciation functions between the as-built system and the UFSAR description of these functions. There is no effect on the operation of the auxiliary river water system. Thus, no Unreviewed Safety Question is created by the change.

CHANGE TITLE

UFSAR Change, Seismic Qualification of Category I Electrical Equipment

CHANGE

This change revised a UFSAR statement related to the seismic qualification of electrical equipment for clarification, to recognize that procedures exist for qualification of this equipment by other than the manufacturer, and that qualification can be accomplished by testing or analysis.

Electrical equipment is qualified per regulatory requirements. This change modified the UFSAR to reflect that administrative requirements exist to allow seismic qualification by multiple methods, as appropriate, and by other than the manufacturer. There is no affect on any physical component, its operation, failure modes, or ability to perform its safety function. Therefore, no Unreviewed Safety Question exists.

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CHANGE TITLE

UFSAR Change, UFSAR Section 6.4, Containment Depressurization System

CHANGE

Page 6.4-5 of the BVPS-1 UFSAR stated that the refueling water recirculation pumps can be used to prevent the RWST from freezing by adding pump heat. This statement was changed by replacing the reference to the refueling water recirculation pump with a reference to the RWST Technical Specifications.

The change replaced a description of the equipment used to prevent the RWST from freezing with a reference to the RWST Technical Specifications. This information is not necessary to permit understanding of the system designs and their relationship to safety evaluations. Minimum RWST temperature is controlled by surveillances and plant procedures that are in place to assure that Technical Specification limits are maintained. The change does not involve any change to the operation of any equipment or the plant. The change will not result in a Unreviewed Safety Question because the change will not introduce any new failure modes or malfunctions or increase the probability or consequences of an accident presently evaluated in the UFSAR.

CHANGE TITLE

UFSAR Change, Section 9.1, UFSAR Verification Project Change Package 1-7-11

CHANGE

This change replaced UFSAR Figure 9.1-1 A, Charging and Volume Control System - Sheet 1 and UFSAR Figure 9.1-1 B, Charging and Volume Control System - Sheet 2 with one simplified figure, and deleted UFSAR Figure 15-8, Charging and Volume Control System. This change also deleted the second sentence in the first paragraph of Section 9.1.5, "The location of the instrumentation is shown in Figure 9.1-1 A and 9.1-1 B," and deleted the "A" and the "B" on the references to Figures 9.1-1 A and B in Table 5.3-1, and deleted reference to Figures 9.1-1 A, B on pages 9.1-4 and 6.3-5.

The simplified figures replaced excessively detailed figures which contained information which is not necessary for the reader to understand the system design and its relationship to safety evaluations. The text changes were made to reference the simplified figures; the deleted CVCS text regarding instrumentation shown on the figure is redundant to the UFSAR discussion on instrumentation. These changes were administrative in nature, no physical plant changes were made. Therefore, this is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 7.7.1.8, Tav_g Variations at Low Power Level

CHANGE

The BVPS Unit 1 UFSAR Section 7.7.1.8 was revised to recognize that during startup operation from 0% to approximately 18% power, the steam dump system is operated in steam pressure mode with a constant steam pressure control setpoint corresponding to no-load Tav_g (approximately 1005 psig). Since the program Tav_g is calculated based on decreasing steam pressure as power increases, a Tav_g higher than program is required to be maintained in order to compensate for the constant steam pressure and temperature.

The accident analyses assume that the plant is operating on its Tav_g program prior to any initiating event. However, evaluations have demonstrated that this change does not violate any of the safety analysis limits. This change will not increase the probability of any of the accident scenarios analyzed in the UFSAR or their consequences or create any new accident scenarios. Therefore, this change is not an Unreviewed Safety Question.

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CHANGE TITLE

UFSAR Change, Revision to Component Cooling Water "Incident Control" Portion of Section 9.4.4

CHANGE

This change removed a portion of the UFSAR description related to the use of high flow of river water to the containment air recirculation coolers to control containment pressure rise due to a minor incident or pipe break.

The purpose of the containment air recirculation system is to maintain acceptable containment air temperature during normal operation. The system has no safety function and has no effect on the safety function of any other system. Therefore, the removal of the discussion of the possible use of the system to control containment temperature and pressure in case of a minor incident or leak can not affect the probability or consequence of any accident or malfunction evaluated in the UFSAR. Since this change has no impact to nuclear safety, this change is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Table 9.2-1, Boron Recovery System Component Design Data

CHANGE

This safety evaluation addressed the UFSAR changes associated with the UFSAR Verification Project Closure Packages related to the Boron Recovery System.

The UFSAR changes do not involve a physical plant change, a current plant procedure change, or a test or experiment. The changes correct or clarify the UFSAR text to reflect the as-built plant and current procedures. It has been concluded that no Unreviewed Safety Questions are associated with the UFSAR changes.

CHANGE TITLE

UFSAR Change, Figure 9.1-2, UFSAR Verification Project Closure Package 1-7-14

CHANGE

The change replaced UFSAR Figure 9.1-2, Charging and Volume Control System with one simplified figure.

The simplified figure replaced an excessively detailed figure. No physical plant changes were made. The simplified figure replaced an excessively detailed figure which contains information which is not necessary for the reader to understand the system design and its relationship to safety evaluations. Therefore, this change is not an Unreviewed Safety Question.

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CHANGE TITLE

UFSAR Change, Section 10.3.5.2.2, UFSAR Verification Project Closure Package No. 1-24-9

CHANGE

This change replaced the second paragraph on page 10.3-17 to simplify statements in the UFSAR regarding the auxiliary feedwater pump turbine performance. No physical change to the plant were made by this administrative correction.

There are no new failure modes or malfunctions attributable to the simplification of the text. Also, the simplification of the text will not affect the probability or consequences of any accident since the changes to the text are not accident initiators and the auxiliary feedwater pump turbine, piping, valves, and design and operating parameters are not changed. The changes are not physical changes to plant equipment. The actual performance of the auxiliary feedwater pump turbine and auxiliary feedwater system is not affected in any manner by this change, therefore an Unreviewed Safety Question is not involved.

CHANGE TITLE

UFSAR Change, UFSAR Verification Project Closure Package No. 1-15-62

CHANGE

This change replaced the following UFSAR figures with one simplified figure: UFSAR Figure 9.4-1 Component Cooling Water System - Sheet; UFSAR Figure 9.4-2, Component Cooling Water System - Sheet 2; UFSAR Figure 9.4-3, Component Cooling Water System - Sheet 3; and UFSAR Figure 9.4-4, Component Cooling Water System - Sheet 4. The changes revised the text references to the figures on UFSAR pages 9.1-3, 9.4-1, 6, 9, 10, and 12; Table 5.3-1, pages 1, 2, and 3 to reference the single simplified figure or deleted reference to detailed figures.

These changes were administrative in nature, no physical plant changes were made. The simplified figure replaced excessively detailed figures which contained information which is not necessary for the reader to understand the system design and its relationship to safety evaluations. Since the changes did not affect any design or operating parameters, and the changes did not affect any accident analysis addressed in Chapter 14, and no physical or administrative controls changes were made to the plant, this is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, UFSAR Section 10.3.5.2.2, Auxiliary Feedwater System

CHANGE

The volume for the Primary Plant Demineralized Water Storage Tank (PPDWST) shown on UFSAR Page 10.3-16 and Figure 10.3-5, and drawings 8700-RM-18A and 8700-RM424-2 were being changed to a nominal volume of 152,000 gallons.

The change is not a physical change to the tank, but rather a more accurate representation of the tank's capacity. The PPDWST is sized such that the shutdown needs are satisfied. The old UFSAR value is 140,000 gallons. The change to 152,000 gallons does not involve any change to the tank itself. It represents what the tank can actually hold. Since the new number is greater than the old number more margin exists over the required Technical Specification limit of the PPDWST. Since greater margin exist and this change is merely a representation of the actual capacity of the tank, this change will not result in an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Revision To BVPS-1 UFSAR Statements Regarding Probable Maximum Flood (PMF)

CHANGE

This change revised statements regarding worst-case Probable Maximum Flood (PMF). UFSAR statements regarding the design of the CVCS equipment in the basement (El. 722') of the Auxiliary Building for the impact of a worst-case PMF were misleading. Not all such equipment is located above the PMF level; however, the licensing basis (RG 1.59, Rev. 1) did not require this design provision.

These revisions represent a clarification of the existing requirements which more correctly reflect the original PSAR. The NRC Safety Evaluation Report (SER) does mention that RG 1.59 was used to review the FSAR statements. As such these changes do not change any of the assumptions used in the UFSAR accident analyses and therefore, this change does not represent an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Deletion of Statement Referring to Reduced Power Operation Due to a 480V Bus Loss

CHANGE

This change deleted the statement "Reduced unit output is possible with one bus out of service." This statement is unchanged from the PSAR. The 480V bus arrangement has changed from the original design. The need to curtail operation due to the loss of a 480V bus would depend upon which equipment is supplied by the lost bus and whether redundant equipment is available on another bus.

The loss of a normal 480 volt bus, whether or not there is a subsequent reduction in station output, has no affect on the ability of any safety system to perform its function. The loss of an emergency 480V bus is part of the emergency power system design and has been previously analyzed. Therefore, this change does not create an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 7.2.2.3.2, Specific Control and Protection Interactions

CHANGE

UFSAR Section 7.2.2.3.2 was revised to delete the first paragraph since it describes the method of testing the Resistance Temperature Detectors (RTDs) based upon the original design of the RTDs in the loop bypass system. The RTDs were installed in the Reactor Coolant loops in thermowells by a design change.

This change did not affect any equipment or equipment operation or system configuration in any way that would affect the Licensing or Operational conditions. The change did not affect any accident analysis addressed in Chapter 14. Also, the existing text refers to the RTD bypass loop components deleted by a design change. Therefore, this change does not represent an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, UFSAR Figures 9.2-1 through 4, and UFSAR Pages 9.2-3, 9.2-4, 9.5-7, 11.2-11, and 11.2-12.

CHANGE

This change replaced the following UFSAR figures with one simplified figure: Figure 9.2-1, Boron Recovery System - Sheet 1; Figure 9.2-2, Boron Recovery System - Sheet 2; Figure 9.2-3, Boron Recovery System - Sheet 3; and Figure 9.2-4, Boron Recovery System - Sheet 4. Additional changes revised the text references to the figures on UFSAR pages 9.2-3, 9.2-4, 9.5-7, 11.2-11 and 11.2-12 to reference the single simplified figure.

The simplified figure replaced excessively detailed figures which contained information which is not necessary for the reader to understand the system design and its relationship to safety evaluations. No physical plant changes were made. Therefore, an Unreviewed Safety Question is not involved with this change.

CHANGE TITLE

UFSAR Change, Figure 8.4-2, DCP-740 - Addition of Class 1E Inverter Static Switches

CHANGE

This change revised UFSAR Figure 8.4-2 based upon DCP-740. This design change prevents station trips due to inverter failure on the vital instrument busses. The change installed solid-state transfer switches on each of the busses so that each bus can be transferred from a failing source to its alternate source before the equipment powered from the bus is affected.

Solid-state switches have proven to be more reliable than inverters and are constructed in a more simple design. Transfer of electrical power between alternate power sources no longer requires manual operation, thus lessening the burden to the operator. Also, each emergency electrical train is equipped with two static transfer switches, one for each redundant channel, which is consistent with the single failure criterion applied for accident analyses. Therefore, this change does not represent an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Section 9.3.2.1, RWST Return Line from RCS

CHANGE

This change revised UFSAR to clarify the use of the line from the RHR system to the RWST. This clarification identifies that the line from the RHR to the RWST may also be used to return water from the RCS to the RWST during tests that inject large quantities of water into the RCS. Returning the water to the RWST will reclaim water instead of transferring the water to the coolant recovery tanks for processing.

This system alignment is controlled by plant procedures where operators are in constant communication with the control room. This system alignment is not permitted during refueling operation when containment integrity is required. RWST inventory will not be affected by this change. The change in plant configuration will not create the possibility of any new accidents. Therefore, this change does not represent an Unreviewed Safety Question.

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CHANGE TITLE

UFSAR Change, Section 7.7.1.3.3, Control Bank Rod Insertion Monitoring

CHANGE

This change revised incorrect statements describing the Control Bank Rod Insertion Limit Monitor regarding the alarm limits.

This change removed inaccurate information from the UFSAR and did not impact the performance of any plant equipment. The rod insertion limit alarm is provided as an administrative aid to alert Operations personnel of excessive rod insertion. The alarm does not perform any protective functions assumed in the safety analyses to mitigate a design basis accident. Therefore, this change does not represent an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Alternate Shutdown Components Maintenance

CHANGE

This change incorporated Maintenance Rule criteria as the basis for establishing preventive and corrective maintenance schedules and for assigning maintenance resources to key alternate shutdown components.

Alternate shutdown capability is a defense-in-depth measure that is directly imposed by regulation rather than being derived from an accident analysis. The changes do not affect probability of occurrence or the consequences of an accident or malfunction previously analyzed in the SAR because (1) the changes do not alter plant design, operating characteristics, or operating procedures and (2) the need for alternate shutdown capability is not derived from an analyzed accident or malfunction. Therefore this change is not an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, Revision of Description of Primary Grade Water System

CHANGE

The BVPS Unit 1 UFSAR was updated to reflect the fact that BVPS Unit 2 can be supplied with Primary Grade (PG) water from BVPS Unit 1. No equipment changes were made by this change. The BVPS Unit 2 UFSAR already contains such reference.

The PG system is not safety related and is not called upon by accident analysis for support or mitigation. This change adds reference information to be consistent with the Unit 2 UFSAR, and no equipment or system changes were made by this change. Therefore, this change does not represent an Unreviewed Safety Question.

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CHANGE TITLE

UFSAR Change, Revision to Primary Grade Water Storage Tank Filling Operation

CHANGE

This change eliminated incorrect statements regarding the filling of the Primary Grade (PG) Water Tank, and eliminated excessive detail associated with the tanks.

This change did not require a change to the normal system alignment or the method of operation of the PG Water Tank. The PG system is not safety related and is not called upon by accident analysis for support or mitigation. The rupture of a PG Water Tank was not evaluated in the UFSAR nor were these tanks considered as a potential release pathway. Therefore, this change does not represent an Unreviewed Safety Question.

CHANGE TITLE

UFSAR Change, IEEE-279 Qualification for Non-credited Reactor Protection System Trips

CHANGE

This change clarified the qualification of non-seismically installed components in the Reactor Protection System (RPS) trip circuits. This change also added detail to the UFSAR to distinguish between the trips that are credited in the accident analyses and those that are not credited.

The change in wording of the UFSAR clarifies the extent that the IEEE-279 standard applies to the non-credited trips and their qualifications. A circuit failure evaluation was performed and showed that none of the trips degraded the RPS from performing the required functions. Therefore, this change does not represent an Unreviewed Safety Question.